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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/608,580

06/27/2003

Robert A. Bellman

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04/04/2006

CORNING INCORPORATED

SP-TI-3-1

CORNING, NY 14831

EXAMINER

HOFFMANN, JOHN M

ART UNIT

PAPER NUMBER

1731

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/608,580	Applicant(s) BELLMAN ET AL.	
	Examiner John Hoffmann	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-6,9-13 and 26-29 is/are pending in the application.
- 4a) Of the above claim(s) 5,9,10 and 27-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,6,13 and 26 is/are rejected.
- 7) ☒ Claim(s) 11,12 and 28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim 26 is rejoined. Claim 26 should not have been included in the prior objection.

Claims 5, 9-12, 27 and 29 remain withdrawn for the reasons of record.

Although the prior Office action indicated allowable subject matter, a complete review of the application demonstrates the invention was anticipated. Examiner apologizes for the errors.

Claim Objections

Claims 11-12 and 28 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Claim 1 requires the ratio be 1:1, 2:1, 3:1 or 4:1 – each is stoichiometric. But claim 11 requires the ratio be non-stoichiometric. Ratio cannot be both stoichiometric and non-stoichiometric. These are two mutually exclusive conditions. Claim 11 does not further limit claim 1, rather, it takes it to a new and completely mutually exclusive scope.

Claim 28 has essentially the same problem: Claim 26 has stoichiometric ratios. But claim 28 specifies that the ratio “relative to j” is not stoichiometric. Since j is 1, 2, 3 or 4, and M = 1, the ratio (relative to j) must be 1:1, 2:1, 3:1 or 4:1. Therefore, claim 28 does not further limit claim 26, rather it takes it to a mutually exclusive scope where j cannot be 1, 2, 3 or 4.

Claims 11-12 and 28 are not further treated on their merits.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 4, 26, and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The difference between “R” and “R3” is not understood. See prior Office action. Although Applicant argues that R3 signifies that there are three groups, the claims clearly contradict this. Line 5 of claim 1 indicates that R3 is “an alkyl moiety”: thus it indicates that there are NOT three moieties/groups, rather there is one moiety.

Claim 26: the term “photolithographic techniques” is indefinite as to its meaning. This rejection is made to maintain compact prosecution – in the event examiner’s interpretation in the prior art rejection of claim 26 is contested.

The term “photolithographic techniques” makes the claims indefinite. Examiner notes that the present application does not set forth a definition for the term; nor is there any mention of any embodiment nor any sort of description. Secondly, Examiner is not aware of any art-recognized meaning for the term.

Third, Examiner notes that since the claim requires “techniques”, the claim does not encompass a process with only one “photolithographic technique”. Examiner also notes that many commercial photolithographic (semiconductor) processes have

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hundreds of steps. It would seem that one would not be able to ascertain whether such a process is actually one "technique" or many techniques.

To look at it another way: it is unclear whether a potential competitor could (arbitrarily) designate a complete photolithographic process as a single technique so as to avoid infringement.

See Allen Eng'g Corp. V. Bartell Indus. Inc. 299 F.3d 1336, 1348, 63 USPQ2d 1769, 1775 (Fed. Cir. 2002) (quoting Personalized Media Communications, LLC v. Int'l Trade Comm'n, 161 F.3d 696, 705, 48 USPQ2d 1880, 1888 (Fed. Cir. 1998)) ("In determining whether the claim is sufficiently definite, we must analyze whether "one skilled in the art would understand the bounds of the claim when read in light of the specification.") See also, Exxon Research & Eng'g Co. v. United States, 265 F.3d 1371, 1375, 60 USPQ2d 1272, 1276 (Fed. Cir. 2001) (citation omitted) (patent claims must be "sufficiently precise to permit a potential competitor to determine whether or not he is infringing").

See also the prior art rejection.

For these reasons it is deemed that one would not understand the metes and bounds of the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 26 and 13 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Adams 3582395.

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See col. 1, lines 28-31, claim 3 and Example 6 which disclose the invention.

Although Adams only refers to decomposition, it is inherent that oxygen was supplied from somewhere, because the process creates titania-silica coatings (example 6) but there is insufficient oxygen in the precursor compound. The compound inherently had to react with oxygen. Alternatively, Adams reaction is a "decomposition reaction".

Although Adams does not characterize the coating as glass, one would immediately infer from Adams's "metal oxide films", and "silica" that the coating is glass.

Alternatively, the Example 6 fire polishing would form it into glass.

From MPEP 2144.01 Implicit Disclosure:

"[I]n considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom." *In re Preda*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

See also, *In re Fritch*, 972 F.2d 1260, 1264-65, 23 USPQ2d 1780, 1782-83 (Fed. Cir. 1992); *In re Sovish*, 769 F.2d 738, 743, 226 USPQ 771, 774 (Fed. Cir 1985).

Claim 4: see col. 1, line 42 which teaches the compound can be applied in vaporized form. It is deemed that this reads on "CVD"

Claim 26: It is deemed that Adams's final device could be considered a waveguide. See figure 17a of Imoto US Patent 4856859 which shows that a layer can be a waveguide. The fire polishing and the inherent subsequent cooling are deemed to be "photolithographic techniques": Col. 1, lines 12-21 of Miyazaki 5882371 indicates

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that heating and cooling are parts of a photolithographic process. It is deemed that such parts constitute "techniques". It is noted that the term "photolithographic techniques" is not defined, explained or exemplified in the present specification. It is deemed that the broadest reasonable interpretation of the term is that it includes substantially any technique that is used in any photolithographic process.

The PTO gives a disputed claim term its broadest reasonable interpretation during patent prosecution. Hyatt, 211 F.3d at 1372. The "broadest reasonable interpretation" rule recognizes that "before a patent is granted the claims are readily amended as part of the examination process." Burlington Indus. v. Quigg, 822 F.2d 1581, 1583 (Fed. Cir. 1987). Thus, a patent applicant has the opportunity and responsibility to remove any ambiguity in claim term meaning by amending the application. In re Prater, 415 F.2d 1393, 1404-05 (CCPA 1969). Additionally, the broadest reasonable interpretation rule "serves the public interest by reducing the possibility that claims, finally allowed, will be given broader scope than is justified." In re Am. Acad. of Sci. Tech. Ctr., 367 F.3d 1359, 1364 (Fed. Cir. 2004) (quoting In re Yamamoto, 740 F.2d 1569, 1571-72 (Fed. Cir. 1984)).

Claim Rejections - 35 USC § 103

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Adams 3582395 as applied to claim 1, and further in view of Antos 5296012 and Blackwell 5154744.

Adams does not disclose the use of PECVD. However, it is "well-known" that PECVD is used to make preforms for optical fibers (Antos, col.1, lines 9-14) and that they are doped with TiO₂ from a chloride (Antos, col. 1, line 43-46).

Blackwell teaches that use of chlorides is problematic (col. 1, lines 32-52) and that Ti doping gives "superior strength" (col. 2, lines 13-22). Also, col. 4, lines 19-32 teaches that the use of titanium isopropoxide can be used in conventional fiber making methods.

Adams teaches that a trimethylsilyloxide (that reads on the present claimed precursor) is stable and is little affected by heat and moisture (Col. 2, lines 24-29). Col. 2, lines 37-38 of Adams also discloses that Blackwell's precursor is "very sensitive" to moisture and this is problematic (col. 1, line 49-57) That such precursor can be used instead of titanates or as a stabilizer thereto (col. 1, lines 58-68 and elsewhere).

It would have been obvious to use titanium oxide as the dopant in the (Antos) PECVD method of making fibers, for the superior strength thereof, and furthermore to use the trimethylsilyloxide in one of the two manners that Adams teaches, so as to avoid the problem of chlorine and for the stability of the trimethylsilyloxide.

As to the glass having one of the specific ratios: it would have been obvious to have as much of a dopant as desired – depending upon the desired optical and mechanical properties. Alternatively, it would have been obvious to perform routine experimentation to determine the optimal amount of Ti.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

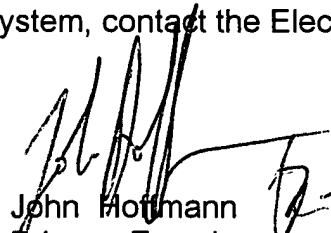
IT is argued that R3 signifies three groups. This is not understood: claim 1 states that R3 is a moiety – (i.e. exactly one group) – thus it cannot be three groups.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John Hoffmann
Primary Examiner
Art Unit 1731

4-3-06

jmh